

What Is Claimed Is:

1. A method for dyeing a lens, comprising:

forming a dye coating on a surface of the lens;

providing a heating furnace comprising a frame section forming a space within the

5 heating furnace, a heating section provided within the frame section, and an insertion port for inserting the lens provided on or near a bottom surface of the frame section;

setting a temperature distribution state within the heating furnace such that the temperature increases from the vicinity of the insertion port toward the inside of the frame section;

10 inserting all or a part of the dye coating-formed lens from the insertion port into a portion inside of the heating furnace having the temperature distribution state set up therein; and

heating the dye coating-formed lens to diffuse the dye into the lens.

2. The method for dyeing a lens of claim 1, further comprising moving the lens in a

15 vertical direction while the heating is carried out.

3. The method for a dyeing a lens of claim 1 or 2, further comprising providing the heating furnace with a cooling mechanism in a position corresponding to a position of a portion of the lens not requiring coloration.

4. The method for a dyeing a lens of claim 1 or 2, further comprising controlling  
20 the heating of the lens so as to produce a variation in coloration in the lens.

5. The method for dyeing a lens of claim 1, wherein the lens material is a material suitable for making lenses for visual acuity correction selected from the group consisting of polydiethylene glycol bisallyl carbonate, methyl methacrylate homopolymers, copolymers of methyl methacrylate and at least one other monomer, polycarbonate, polystyrene,  
25 polyethylene terephthalate, polyurethane, polythiourethane, and other sulfur containing

polymers.

6. The method for dyeing a lens of claim 1, wherein the dye used to form the dye coating is a disperse dye.

7. The method of dyeing a lens of claim 6, further comprising providing an aqueous dye solution comprising 10 % by weight or more of the dye based on the total weight of the dye solution.

8. The method of dyeing a lens of claim 6, further comprising providing an aqueous dye solution comprising 20 % by weight or more of the dye based on the total weight of the dye solution.

9. The method of dyeing a lens of claim 6, further comprising providing an aqueous dye solution comprising from 0.1 to 20 % by weight of the dye and a water-soluble polymer selected from the group consisting of polyvinyl alcohol, polyacrylic acid, polyacrylic acid metal salts, polyacrylamide, polyvinylpyrrolidone, polyethylene glycol, polyoxyethylene alkyl ethers and mixtures thereof.

10. The method of dyeing a lens of claim 6, further comprising providing an aqueous dye solution comprising from 3 to 10 % by weight of the dye and a water-soluble polymer selected from the group consisting of polyvinyl alcohol, polyacrylic acid, polyacrylic acid metal salts, polyacrylamide, polyvinylpyrrolidone, polyethylene glycol, polyoxyethylene alkyl ethers and mixtures thereof.

11. A dyeing device for dyeing plastic lenses, comprising:  
a heating furnace comprising a frame section forming a space within the heating furnace;  
a heating section provided within the frame section;  
an openable insertion port for allowing insertion of the lens provided on or near a bottom surface of the frame section;

a lens-holding mechanism for holding a dye coating-formed lens; and  
a lens-moving mechanism for moving the lens-holding mechanism to insert all or a part of the lens from the insertion port into an interior portion of the heating furnace.

12. The dyeing device for dyeing plastic lenses of claim 11, wherein the heating  
5 furnace further comprises a cooling mechanism in a position corresponding to a portion of the lens within the frame section not requiring coloration.

13. The dyeing device for dyeing plastic lenses of claim 11 or 12, wherein the lens-moving mechanism further comprises a device for controlling the insertion position of the lens into the interior portion of the furnace.

10 14. The dyeing device for dyeing plastic lenses of claim 11 or 12, further comprising a device for controlling a temperature distribution within the heating section so as to produce a half-dyed lens.